

USSN 10/780,428

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**Drawing Corrections**

Please accept the attached replacement drawing sheet 1/10 containing new corrected drawing Figure 1.

**REMARKS**

The February 2, 2007, Office action requested election of either species I (drawn to a pair of coaxial plungers driven by a single cam ring) or species II (drawn to parallel-spaced plungers driven by separate cams). In addition, the February 2, 2007, Office action required corrected drawings, objected to claim 11, and rejected claims 1-3, and 5-11. Claim 4 was withdrawn. To expedite prosecution of this case, this Amendment and Response confirms the election of species I and the withdrawal of claim 4; cancels claims 2, 3, and 6; amends claims 1 and 7-11; adds new claim 12; and amends the drawings and the title; all without prejudice or disclaimer. Applicants reserve the right to pursue the subject matter of the original claims in co-pending applications. Support for the amendments may be found in the originally filed specification, claims and figures; no new matter has been introduced. After entry of this amendment, claims 1-12 are pending in the application including 2 independent claims. In view of the amendments and remarks presented in this paper, reconsideration of the application is respectfully requested.

**Title**

Applicants have amended the title to "CAM-DRIVEN FLUID PUMP," and submit that this amended title is clearly indicative of the claimed invention.

**Objections to the Drawings**

In the February 2, 2007, Office action, the Examiner objected to drawing figures 1 on the basis that it should be designated by a legend such as --Prior Art--. Applicants have submitted replacement drawing sheet 1/10 containing new corrected drawing Figure 1, which are designated as --Prior Art--. Accordingly, Applicants request that the objection be withdrawn.

**Claim Objections**

In the February 2, 2007, Office action, the Examiner objected to claim 11 as failing to further limit the subject matter of the previous claim. Applicants have amended claim 11 to require that “each said inlet port is connected to the outlet of a transfer pump.” This amendment finds full support in the originally filed claims, specification, or drawings. (See, e.g., Specification page 9 at the end of the second full paragraph.). Reconsideration and withdrawal of the objection to claim 11 are requested.

**Claim Rejections under 35 USC §102**

In the February 2, 2007, Office action, the Examiner rejected claims 1, 5, and 11 under 35 USC 102(b) as being anticipated by Sobek (U.S. Patent No. 2,313,302). For the following reasons, reconsideration and withdrawal of these rejections are respectfully requested.

Applicants have amended claim 1 to emphasize that: (1) the pump comprises two or more pairs of plungers that are all driven by means of a single cam ring; (2) that each pair of plungers is aligned along a respective common bore axis; (3) that the bore axis (plural) are oriented along a common bore axis plane; and (4) that the cam ring is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane. This amendment finds full support in the originally filed claims, specification, or drawings. Applicant’s claimed invention is distinct because neither Sobek nor any other prior art reference discloses a pump that comprises two or more pairs of plungers wherein the bore axis (plural), along which the pairs of plungers are aligned, are all oriented along a common bore axis plane, and wherein the single cam ring that drives the pairs of plungers is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane that is defined by the plural bore axis (plural). Accordingly, Applicants respectfully submit that claim 1, as amended, is allowable. Since claims 5 and 11 depend from amended claim 1, claims 5 and 11 are also allowable. Reconsideration and withdrawal of these rejections of claims 1, 5, and 11 are requested.

**Claim Rejections under 35 USC §103**

In the February 2, 2007, Office action, the Examiner rejected claims 6 and 10 under 35 USC §103(a) as being unpatentable over Sobek. For the following reasons, reconsideration and withdrawal of these rejections are respectfully requested.

Applicants have amended claim 10 to emphasize that the pairs of plungers are driven by a single cam ring configured to rotate about a central axis and that the plunger bores are arranged in a single plane oriented substantially transverse to that central axis. This amendment finds full support in the originally filed claims, specification, or drawings. Applicant's claimed invention is distinct because neither Sobek nor any other prior art reference discloses a pump that comprises two or more pairs of plungers - wherein the pairs of plungers are driven by a single cam ring configured to rotate about a central axis, and wherein the plunger bores are arranged in a single plane oriented substantially transverse to that central axis. Accordingly, Applicants respectfully submit that claim 10, as amended, is allowable. Claim 6 is cancelled.

In the February 2, 2007, Office action, the Examiner also rejected claims 2-3 and 7-9 under 35 USC §103(a) as being unpatentable over Sobek in view of Babitzka (U.S. patent no. 4,709,673). For the following reasons, reconsideration and withdrawal of these rejections are respectfully requested.

As discussed above, Applicants have amended claim 1 to emphasize that: (1) the pump comprises two or more pairs of plungers that are all driven by means of a single cam ring; (2) that each pair of plungers is aligned along a respective common bore axis; (3) that the bore axis (plural) are oriented along a common bore axis plane; and (4) that the cam ring is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane. Once again, Applicant's claimed invention is distinct because neither Sobek nor Babitzka, nor any other prior art reference, alone or in combination, discloses a pump that comprises two or more pairs of plungers wherein the bore axis (plural), along which the pairs of plungers are aligned, are all oriented along a common bore axis plane, and wherein the single cam ring that drives the pairs of plungers is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane that is defined by the plural bore axis (plural). Accordingly, Applicants respectfully submit that claim 1, as amended, is not obvious over Sobek, even in view of Babitzka. Since

claims 7-9 depend from amended claim 1, claims 7-9 are also allowable. Claims 2-3 are cancelled.

Finally, in the February 2, 2007, Office action, the Examiner rejected claim 11 under 35 USC §103(a) as being unpatentable over Sobek in view of Jay (U.S. patent no. 6,240,901). For the following reasons, reconsideration and withdrawal of this rejection are respectfully requested.

As discussed above, Applicants have amended claim 1 to emphasize that: (1) the pump comprises two or more pairs of plungers that are all driven by means of a single cam ring; (2) that each pair of plungers is aligned along a respective common bore axis; (3) that the bore axis (plural) are oriented along a common bore axis plane; and (4) that the cam ring is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane. Once again, Applicant's claimed invention is distinct because neither Sobek nor Jay, nor any other prior art reference, alone or in combination, discloses a pump that comprises two or more pairs of plungers wherein the bore axis (plural), along which the pairs of plungers are aligned, are all oriented along a common bore axis plane, and wherein the single cam ring that drives the pairs of plungers is configured to rotate about an axis of rotation that is oriented substantially transverse to the common bore axis plane that is defined by the plural bore axis (plural). Accordingly, Applicants respectfully submit that claim 1, as amended, is not obvious over Sobek, even in view of Jay. Since claim 11 depends from amended claim 1, claim 11 is also allowable.

Reconsideration and withdrawal of these rejections are requested.

**CONCLUSION**

In view of the foregoing, Applicants request the entry of this amendment to the title, the drawings and the claims; the withdrawal of the objections to the drawings and claim 11; and the withdrawal of the rejections of claims 1-3 and 5-11. Reconsideration of the application and allowance of all pending claims is earnestly solicited. Accordingly, the Examiner is requested to reconsider and allow claims 1, 5, and 7-11; to consider and allow new claim 12; and to pass the case to issue.

Should the Examiner wish to discuss any of the above in greater detail or deem that further amendments should be made to improve the form of the claims, the Examiner is invited to contact the undersigned at the Examiner's convenience.

Please charge any necessary fees, including any extension of time, or any other fee deficiencies to Delphi Technologies, Inc., Deposit Account No. 50-0831.

Respectfully submitted,

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**Fig.1**  
PRIOR ART

